**UNITED STATES DEPARTMENT OF COMMERCE**
**National Oceanic and Atmospheric Administration**
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
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Seattle, WA 98115

October 3, 2002

Thomas F. Mueller
Chief, Regulatory Branch
Department of the Army
Seattle District, Corps of Engineers
Post Office Box 3755
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Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the Ivanovich bulkhead project in Gig Harbor, Tacoma, Washington (NMFS No. WHB-01-477, COE No. 1997-1-01537)

Dear Mr. Mueller:

In accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.) and the Magnuson Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996, the attached document transmits the National Marine Fisheries Service's (National Oceanic and Atmospheric Administration [NOAA Fisheries]) Biological Opinion (Opinion) and MSA consultation on the issuance of a permit for construction of the Ivanovich bulkhead project, Gig Harbor, Washington. The Army Corps of Engineers (COE) determined that the proposed action may affect, and is likely to adversely affect the Puget Sound chinook (Oncorhynchus tshawytscha) Evolutionarily Significant Units (ESUs).

This Opinion reflects the results of a formal ESA consultation and contains an analysis of effects covering the Puget Sound chinook. The Opinion is based on information provided in the Biological Evaluation (BE) sent to NOAA Fisheries by the COE, and additional information transmitted via telephone conversations, fax, e-mail, and a site visit. A complete administrative record of this consultation is on file at the Washington Habitat Branch Office.

The NOAA Fisheries concludes that implementation of the proposed project is not likely to jeopardize the continued existence of Puget Sound chinook. In your review, please note that the incidental take statement, which includes a Reasonable and Prudent Measure and Term and Condition, was designed to minimize take.

The MSA consultation concluded that the proposed project may adversely impact designated Essential Fish Habitat (EFH) for 17 species of groundfish, four coastal pelagic species, and three species of Pacific salmon. The Reasonable and Prudent Measure of the ESA consultation, and

Term and Condition identified therein, would address the negative effects resulting from the proposed COE actions. Therefore, NOAA Fisheries recommends that they be adopted as EFH conservation measures.

If you have any questions, please contact Karla Reece of the Washington Habitat Branch at (360) 753-4374.

Sincerely,

for D. Robert Lohn
Regional Administrator

Enclosure

# Endangered Species Act - Section 7 Consultation
# Biological Opinion
# &
# Magnuson-Stevens Act
# Essential Fish Habitat Consultation

WSB-01-477

Peter Ivanovich Bulkhead, Gig Harbor,
Pierce County, Washington

Agency: US Army Corps of Engineers

Consultation Conducted By: National Oceanic and Atmospheric Administration Fisheries, Northwest Region

Issued by: for _____ Date Issued: 10/03/2002
D. Robert Lohn
Regional Administrator

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# 1.0 INTRODUCTION

## 1.1 Background and Consultation History

On November 8, 2001, the National Marine Fisheries Service (National Atmospheric and Oceanic Administration [NOAA Fisheries]) received a Biological Evaluation (BE) and a request for consultations for the Endangered Species Act (ESA) section 7 and Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) from the United States Army Corps of Engineers (COE). Formal consultation under the ESA and MSA was initiated on June 4, 2002. The proposed federal action is the issuance of a permit to Peter Ivanovich for the construction of a new bulkhead in Gig Harbor, Washington. The BE and addendum described a proposal by Mr. Ivanovich to construct a vertical wooden bulkhead to protect his property from further erosion.

This Biological Opinion (Opinion) reflects the results of the consultation process. In addition to the BE, the consultation process has involved communications with a Washington State Department of Fish and Wildlife habitat biologist, and a site visit. The site visit was conducted on June 2, 2002, during a low tide (~ 6.2 ft tide at 1030 hours).

The object of this Opinion is to determine whether the proposed project is likely to jeopardize the continued existence of Puget Sound chinook (*Oncorhynchus tshawytscha*). The standards for determining jeopardy are described in section 7(a)(2) of the ESA and further defined in 50 C.F.R. 402.14. This Opinion is based on the information presented in the BE, phone conversations, and electronic mail correspondence.

## 1.2 Description of the Proposed Action

The COE proposes to issue a permit to Peter Ivanovich that would allow the construction of a vertical wooden bulkhead at 3617 Harborview Drive, Gig Harbor, Washington (SW 1/4 of Sec 5, TP 21N, R 02E). The bulkhead will protect the Ivanovich property from further erosion.

The new bulkhead will be 6-feet high by 50-feet wide. The bulkhead will be constructed of 4-inch by 10-inch Chemonite pressure treated planks secured to ten Chemonite treated pilings installed at seven foot on center. The bulkhead will join with adjacent existing bulkheads to the northwest and the southwest of the site. The proposed project is scheduled to begin in summer of 2002. All in-water work will be completed between July 15 and October 1. No creosote will be used.

A construction staging area for the project will be established above the intertidal zone at the Ivanovich property of Novak Street. Planking material for the bulkhead will be delivered to the property by truck and stored onsite until the pilings have been installed.

Piling installation will be conducted at higher tidal levels to prevent barge grounding. Following piling installation, a trench with a minimum depth of 18 inches will be excavated parallel to the

shoreline for timber placement as specified in the Hydraulic Project Approval (HPA). The barge-mounted crane-shovel will excavate the trench and backfill it if it can do so without grounding. If grounding is imminent, the trench will be excavated and backfilled by hand. This work will be conducted during low tide. The trench will be backfilled prior to inundation by tidal waters to insure that fish are not trapped. This will require constructing the bulkhead footing in small sections during low tide periods. Vegetation removal at the site will be limited to the trimming of overhanging vegetation to allow construction of the bulkhead. No root systems will be disturbed. Disturbed areas on the project site would be restored by planting native riparian trees, shrubs, and grass as required by the conditions of the HPA Restoration of the disturbed bluff area affected by construction activities will occur within three weeks following project completion. Native vegetation including salt tolerant willow will be replanted.

All man-made materials will be removed from the beach and transported to an upland disposal area. A gravel truck will deliver 20 yards of selected gravels which will be placed on the beach as specified in the HPA. Gravels placed will be of material similar in composition to the on-site bank/bluff substrate or in compliance with the specifications listed in the HPA. The barge mounted shovel will spread this material over the beach area.

The project will take approximately 30 days to complete.

### 1.3 Description of the Action Area

The Action Area (AA) is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 C.F.R. 402.02).

The AA is located within the City of Gig Harbor on the shoreline of Puget Sound in Pierce County, Washington. The AA for threatened fish species will be considered to be the intertidal area and the nearshore subtidal zone commonly referred to as the area between mean lower low water elevation (MLLW) and about -30 feet MLLW. The length of the action area will be for the 50 foot project length and an additional 100 feet to the north and south of the project.

## 2.0 ENDANGERED SPECIES ACT

### 2.1 Biological Opinion

#### 2.1.1 Status of the Species

Puget Sound chinook salmon was listed on March 24, 1999 (64 Fed. Reg. 14307). The species status review identified the high level of hatchery production which masks severe population depression in the evolutionary significant unit (ESU), as well as severe degradation of spawning and rearing habitats, and restriction or elimination of migratory access as causes for the range-wide decline in Puget Sound chinook salmon stocks (NMFS, 1998a, and 1998b).

The life history stage of Chinook that would appear to be most vulnerable to impacts from the proposed project is smolts. The final joint WDFW/Tribal Wild Salmonid Policy identifies tidally influenced lands and estuaries as one of three critical habitat areas for wild salmonids (WDFW, 1997). These areas provide transition habitat for salmonid smolts as they leave fresh water to begin their ocean life phase. There is no information on the origination of juvenile chinook that utilize Gig Harbor.

The listing includes all naturally spawned populations of chinook salmon from rivers and streams flowing into Puget Sound including the Straits of Juan De Fuca from the Elwha River, eastward, including rivers and streams flowing into Hood Canal, South Sound, North Sound and the Strait of Georgia in Washington. For purposes of salmon recovery, the project area is included within the Puget Sound Southwest area, which includes all or part of Thurston, Pierce, Kitsap, Mason, Jefferson and Clallam counties. The Water Resource Inventory Area's (WRIA) included in all or part are the Deschutes (13), Kitsap (15), Skokomish/Dosewallips (16), Quilcene/Snow (17), and Elwha/Dungeness (18). None of these streams directly enter Gig Harbor. There are two minor streams which support salmon populations that do enter Gig Harbor, Crescent Creek entering from the north and Donkey Creek entering from the West. The stocks most likely to utilize the Gig Harbor area are from Crescent Creek, Donkey Creek, the Nisqually River and the Puyallup River. In addition, the spring run chinook hatchery stock in the White River (Puyallup tributary) is considered to be part of the ESU and may frequent the area. Naturally spawning populations of chinook in Crescent and Donkey Creek are hatchery strays as there were no historic self-sustaining wild chinook populations in these streams. Only three to four chinook have been observed in these streams in the last few years.

### 2.1.2 Evaluating Proposed Actions

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 C.F.R. Part 402 (the consulting regulations). NOAA Fisheries must determine whether the action is likely to jeopardize the listed species and/or whether the action is likely to destroy or adversely modify critical habitat. This analysis involves the initial steps of (1) defining the biological requirements and current status of the listed species, and (2) evaluating the relevance of the environmental baseline to the species' current status.

Subsequently, NOAA Fisheries evaluates whether the action is likely to jeopardize the listed species by determining if the species can be expected to survive with an adequate potential for recovery. In making this determination, NOAA Fisheries must consider the estimated level of mortality attributable to: (1) collective effects of the proposed or continuing action; (2) the environmental baseline; and (3) any cumulative effects. This evaluation must take into account measures for survival and recovery specific to the listed salmon's life stages that occur beyond the action area. If NOAA Fisheries finds that the action is likely to jeopardize the continued existence of the listed species, then NOAA Fisheries must identify reasonable and prudent alternatives for the action.

### 2.1.3 Biological Requirements

The first step in the methods NOAA Fisheries uses for applying the ESA section 7(a)(2) to listed salmon is to define the species' biological requirements that are most relevant to each consultation. NOAA Fisheries also considers the current status of the listed species taking into account population size, trends, distribution and genetic diversity. To assess the current status of the listed species, NOAA Fisheries starts with the determinations made in its decision to list Puget Sound chinook for ESA protection and also considers new data available that is relevant to the determination.

The relevant biological requirements are those necessary for Puget Sound chinook to survive and recover to naturally reproducing population levels at which time protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stocks, and enhance their capacity to adapt to various environmental conditions, and allow them to become self-sustaining in the natural environment.

Five general classes of features or characteristics determine the suitability of aquatic habitats for salmonids: flow regime, water quality, habitat structure (rearing and sheltering areas), food (energy) source, and biotic interactions (Spence, *et al.*, 1996). For this consultation, water quality, habitat structure, food (energy) source and biotic interactions are features NOAA Fisheries believes may be adversely affected as a result of this project.

### 2.1.4 Environmental Baseline

The project area is in a highly developed area with a moderate bluff heavily covered with a mixture of native and introduced vegetation. Extensive undercutting of the bluff is evident in the area immediately below a large fir tree. Over time this undercutting has gotten progressively worse. The shoreline on either side of the property has been armored with both concrete and wooden bulkheads for several hundred feet. 76.71 percent of the shoreline in Gig Harbor is armored (Bloch, 2002). This armoring has increased the rate of erosion on the subject property.

A SCUBA survey made at the site on August 5, 1999 reported that the substrata at the toe of the proposed bulkhead consists primarily of sand, rock and cobble. The substrata rapidly transitions to mud, silt and various manmade debris consisting of sunken creosote logs, concrete rubble, boat rudders, grills and various discarded ship debris. Silt dominates everywhere else throughout the site, both intertidally and subtidally. Anaerobic decomposition within the silt is evident. The substrata is not favorable to eelgrass and consequently none was observed. The diversity and abundance of all observed macroalgae, invertebrates and vertebrates are low at the project site. There is a likely correlation between these observations and the extensive upland, shoreline and intertidal development.

Within the action area, the biological requirements for the Puget Sound chinook are not being met under the existing environmental baseline.

### 2.1.5 Effects of the Proposed Action

The proposed bulkhead construction and all related construction activities are likely to adversely affect Puget Sound chinook salmon. NOAA Fisheries' ESA implementing regulations define "effects of the action" as "the direct and indirect effects of an action on the species or critical habitat together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline" (50 C.F.R. 402.02). "Indirect effects" are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

The ten piles, and nine 4x10" wood planks have been treated with Chemonite. In the freshwater environment, copper is the main metal of concern from this treatment because it is the most acutely toxic. Also, in freshwater, copper leaches the most, followed by arsenic and chromium (NMFS, 1998). It is not known however, the fate of these heavy metals in the marine environment. Due to the pH of marine water, significant leaching of these metals is not expected. However, some leachate of metals from the treated wood will undoubtably occur on exposed parts of the piling and wood planks when it rains, and localized, potentially adverse water quality effects may result.

#### 2.1.5.1 Direct Effects

Direct effects are the immediate effects of the project on the species or its habitat. Direct effects result from the agency action and include the effects of interrelated and interdependent actions. Future federal actions that are not a direct effect of the action under consideration (and not included in the environmental baseline or treated as indirect effects) are not evaluated (USFWS and NMFS 1998).

Shoreline armoring in the form of bulkheads results in the loss of refuge areas for juvenile salmon and other species at high tide. Adverse effects to chinook and their habitat could ordinarily occur during construction of the bulkhead. Turbidity from construction activities may reduce available light and limit photosynthesis of diatoms, benthic algae, benthic invertebrate communities, eelgrass and associated epiphytes on a short term basis. Localized potentially adverse water quality impacts may result due to the use of Chemonite treated materials. However, since work below the ordinary high water like will not occur during salmon migration times and turbidity from construction activities will be avoided through the use of temporary erosion controls, direct adverse effects are not expected. Additionally, direct adverse impacts to the benthic environment will be avoided by operating the barge only during higher tidal elevations.

#### 2.1.5.2 Indirect Effects

Indirect effects are caused by or result from the proposed action, are later in time, and are reasonably certain to occur. Indirect effects may occur outside of the area directly affected by the action. Indirect effects may include other Federal actions that have not undergone section 7

consultation but will result from the action under consideration. These actions must be reasonably certain to occur, or they are a logical extension of the proposed action.

Bulkheads later contribute to increased wave energy, reduced sediment inputs and increased substrate size. Loss of sands may result in loss of spawning areas for salmon prey fish such as sand lance and surf smelt. Loss of sands my also eliminate footing for eelgrass which provides both food and shelter for salmonids. Loss of vegetation reduces inputs of terrestrial insects, detritus and shade. Studies by the Washington State Department of Fisheries (WDFW, 1988) have shown that, as substrata size increases, the epibenthic prey production decreases. However, the addition of this 50 foot bulkhead will have a very small incremental impact on these indicators. There is currently no sand land or surf smelt spawning in the area. Given this it is impossible for the bulkhead to adversely impact something that does not exist. Additionally, vegetation inputs (terrestrial insects, detritus and shade) will be increased over time as a result of the re-vegetation and stabilization of the area upland of the new bulkhead.

### 2.1.6 Cumulative Effects

Cumulative effects are defined as "those effects of future state or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation" (50 C.F.R. 402.2). Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA.

NOAA Fisheries is not aware of any specific future non-Federal activities within the action area that would cause further effects to listed species than presently occur. NOAA Fisheries assumes that future private and state actions will continue at similar intensities as in recent years. As the human population in the state continues to grow, demand for actions similar to the proposed project likely will continue to increase as well. Each subsequent action by itself may have only a small incremental effect, but taken together they may have a significant effect that would further degrade the watershed's environmental baseline and undermine the improvements in habitat conditions necessary for listed species to survive and recover.

### 2.1.7 Conclusion

NOAA Fisheries has reviewed the direct, indirect, and cumulative effects of the proposed action on Puget Sound chinook. NOAA Fisheries applied its evaluation methodology (NMFS 1996) to the proposed action and found that it would cause minor, short-term adverse effects to salmonid habitats due to in-water work and riparian vegetation removal. Direct mortality from this project is possible but will be limited in duration to the in-water work window. Given the extensive shoreline armoring of the harbor, the incremental adverse effect of the new 50 foot bulkhead is expected to maintain marine habitat conditions within the action area. Consequently, the proposed action covered in this Opinion is not likely to jeopardize the continued existence of Puget Sound chinook.

### 2.1.8 Reinitiation of Consultation

This concludes formal consultation for the Ivanovich bulkhead project. Consultation must be reinitiated if: (1) the amount or extent of taking specified in the Incidental Take Statement is exceeded, or is expected to be exceeded; (2) new information reveals effects of the action may affect listed species in a way not previously considered; (3) the action is modified in a way that causes an effect on listed species that was not previously considered; or (4) a new species is listed or critical habitat is designated that may be affected by the action (50 C.F.R. 402.16). To reinitiate consultation, the COE should contact the Habitat Conservation Division (Washington Branch Office) of NOAA Fisheries.

## 2.2 Incidental Take Statement

Section 9 of the ESA and Federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct of listed species without a specific permit or exemption (50 C.F.R. 217.12). "Harm" is further defined by the NOAA Fisheries Final Rule to include significant habitat modification or degradation that results in death or injury to listed species by "significantly impairing essential behavioral patterns such as breeding, spawning, rearing, migrating, feeding, and sheltering" (50 C.F.R. 222.102). "Incidental take" is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action, is not considered prohibited taking provided that such takings is in compliance with the terms and conditions of this incidental take statement.

An incidental take statement specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize the impacts and sets forth terms and conditions with which the action agency must comply in order to implement the reasonable and prudent measures.

### 2.2.1 Amount or Extent of Take Anticipated

NOAA Fisheries anticipates that incidental take of Puget Sound chinook is reasonably certain to occur as the result of the project activities underlying the proposed action. Despite the use of the best scientific and commercial data available, NOAA Fisheries cannot estimate a specific amount of incidental take of individual fish. However, NOAA Fisheries believes that there are several mechanisms through which take of Puget Sound chinook may occur. Direct harm or injury may result from installation and construction activities (e.g., sediment mobilization, boulder placement, loss of riparian habitat), although these effects should be minimized as long as construction activities are conducted according to the proposed best management practices (BMP). Extent of harm could increase if the impact minimizing criteria (i.e., BMPs) are disregarded, but the extent of such harm is impossible to estimate, as it is highly unlikely to

occur. Long term habitat modification, in the form of 50 linear feet of permanently armored shoreline will occur, although the influence of this change will probably be imperceptible to this population of Puget Sound chinook.

### 2.2.2 Reasonable and Prudent Measures

The following reasonable and prudent measures (RPMs) are necessary and appropriate to minimize take of Puget Sound chinook. These RPMs are described on the BE and integrated into the proposed action. NOAA Fisheries has included them here to provide further detail as to their implementation.

1. To minimize the amount and extent of incidental take from construction activities, measures shall be taken to limit the duration and extent of construction within the over highwater mark (OHWM) and to time work such that the impacts to Puget Sound chinook are minimized.

2. To minimize the amount and extent of incidental take from construction activities in or near the project area, effective erosion and pollution control measures shall be developed and implemented throughout the area of disturbance and for the life of the project. The measures shall minimize the movement of soils and sediment both into and within the water, and stabilize bare soil over both the short term and long term.

3. To minimize the amount and extent of incidental take from loss of intertidal habitat, measures shall be taken to minimize impacts to intertidal, or where impacts are unavoidable, to replace or restore lost vegetation.

4. To ensure effectiveness of implementation of the RPMs, all erosion control measures and plantings for site restoration shall be monitored and evaluated both during and following construction, and meet criteria as described below in the terms and conditions.

### 2.2.3 Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, the COE must comply with the following terms and conditions, which implement the RPMs described above. Implementation of the terms and conditions within this Opinion will further reduce the risk of impacts to Puget Sound chinook. These terms and conditions are non-discretionary.

1 To implement RPM No. 1 (construction within the OHWM) above, the COE shall ensure that:

1.1 All work in Gig Harbor will be completed between July 15 and October 1. Any additional extensions of the in-water work period will first be approved by, and coordinated with, NOAA Fisheries and WDFW.

1.2 Alteration or disturbance of the bluff vegetation will be minimized. This will be accomplished by locating the staging area away from the action area and utilizing erosion control measures.

2. To implement RPM No. 2 (construction activities), the COE shall ensure that all erosion and pollution control measures included in the BE are included as special provisions in the 404 permit. The COE shall require that an erosion control plan (ECP) be prepared for the project. The ECP will outline how and to what specifications various erosion control devices will be installed to meet water quality standards, and will provide a specific inspection protocol and time response. Erosion control measures shall be sufficient to ensure compliance with applicable water quality standards and this Opinion. The ECP shall be maintained on site and shall be available for review upon request.

   2.1 Effective erosion control measures shall be in-place at all times during the construction of the project. Construction within the project vicinity will not begin until all temporary erosion controls (e.g., sediment barriers and containment curtains) are in place. Erosion control structures will be maintained throughout the life of the project.

   2.2 Material removed during excavation shall only be placed in upland locations and will be covered during rain.

   2.3 Measures will be taken to prevent construction debris from falling onto the beach. Any material that falls onto the beach during construction operations will be removed in a manner that has a minimum impact on the beach and water quality.

   2.4 The Contractor will develop an adequate, site-specific Spill Prevention and Countermeasure or Pollution Control Plan (PCP), and is responsible for containment and removal of any toxicants released. In the event of a spill, all work shall cease until the spill is contained and cleaned up completely.

   2.5 No surface application of nitrogen fertilizer will be used within 50 feet of the action area.

3. To implement RPM No. 3 (intertidal habitat protection), the COE shall ensure that:

   3.1 Alteration of native vegetation will be minimized. Where native vegetation will be altered, measures shall be taken to ensure that roots are left intact. This will reduce erosion while still allowing room to work. No protection will be made of invasive exotic species (e.g., Himalayan blackberry), although no chemical treatment of invasive species will be used.

   3.2 Riparian vegetation removed will be replaced with a native seed mix, shrubs, and trees. Replacement will occur within the project vicinity.

4. To implement RPM No. 4 (monitoring), the COE shall ensure that:

4.1 Erosion control measures as described above in RPM No. 2 shall be monitored for effectiveness.

4.2 All significant plantings will be monitored to ensure that finished grade slopes are at stable angles of repose and plantings are performing correctly with a success rate of 80 percent.

4.3 Failed plantings will be replaced for a period of three years, if replacement would potentially succeed. If failed plantings would not succeed, plantings at other appropriate locations within the action area will be done.

## 3.0 MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

### 3.1 Background

The Magnuson-Stevens Fishery Conservation and Management, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), established procedures designed to identify, conserve, and enhance Essential Fish Habitat (EFH) for those species regulated under a Federal fisheries management plan. Pursuant to the MSA:

- Federal agencies must consult with NOAA Fisheries on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH (§305(b)(2));
- NOAA Fisheries must provide conservation recommendations for any Federal or State action that would adversely affect EFH (§305(b)(4)(A));
- Federal agencies must provide a detailed response in writing to NOAA Fisheries within 30 days after receiving EFH conservation recommendations. The response must include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with NOAA Fisheries EFH conservation recommendations, the Federal agency must explain its reasons for not following the recommendations (§305(b)(4)(B)).

EFH means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting this definition of EFH: Waters include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; substrate includes sediment, hard bottom, structures underlying the waters, and associated biological communities; necessary means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and "spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle (50 C.F.R. 600.10). Adverse effect means any impact which reduces quality and/or quantity of EFH, and may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey or reduction in species

fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 C.F.R. 600.810).

EFH consultation with NOAA Fisheries is required regarding any Federal agency action that may adversely affect EFH, including actions that occur outside EFH, such as certain upstream and up slope activities.

The objectives of this EFH consultation are to determine whether the proposed action would adversely affect designated EFH and to recommend conservation measures to avoid, minimize, or otherwise offset potential adverse effects to EFH.

### 3.2 Identification of EFH

Pursuant to the MSA the Pacific Fisheries Management Council (PFC.) has designated EFH for three species of federally-managed Pacific salmon: chinook (*Oncorhynchus tshawytscha*); coho (*O. kisutch*), and Puget Sound pink salmon (*O. gorbuscha*) (PFC. 1999). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers (as identified by the PFC. 1999), and longstanding, naturally-impassable barriers (i.e., natural waterfalls in existence for several hundred years). Detailed descriptions and identifications of EFH for salmon are found in Appendix A to Amendment 14 to the Pacific Coast Salmon Plan (PFC. 1999). Assessment of potential adverse effects to these species' EFH from the proposed action is based, in part, on this information.

### 3.3 Proposed Actions

The proposed action and action area are detailed above in Sections 1.2 and 1.3 of this document. The action area includes habitats that have been designated as EFH for various life-history stages of chinook and coho salmon.

### 3.4 Effects of Proposed Actions

As described in detail in Section 2.1.4 of this document, the proposed action may result in detrimental short- and long-term impacts to a variety of habitat parameters. These adverse effects are:

1 Short term degradation of water quality in the action area due to an increase in turbidity during in-water construction.

2 Short term degradation of habitat due to removal of riparian trees and vegetation.

### 3.5 Conclusion

NOAA Fisheries believes that the proposed actions may adversely affect EFH for chinook and coho salmon.

### 3.6 EFH Conservation Recommendations

Pursuant to Section 305(b)(4)(A) of the MSA, NOAA Fisheries is required to provide EFH conservation recommendations to Federal agencies regarding actions that would adversely affect EFH. While NOAA Fisheries understands that the conservation measures described in the BA will be implemented by the COE, it does not believe that these measures are sufficient to address the adverse impacts to EFH described above. Consequently, NOAA Fisheries recommends that the COE implement the following conservation measures to minimize the potential adverse effects to EFH for the species in Table 1:

1. Adopt Terms and Conditions 2 of Section 2.2.3, to minimize EFH adverse effects No. 1.

2. Adopt Terms and Conditions 1.2, 1.3, 3 and 4 of Section 2.2.3, to minimize EFH adverse effects No. 1.

### 3.7 Statutory Response Requirement

Since NOAA Fisheries is not providing conservation recommendations at this time, no 30-day response from the COE is required (MSA §305(b)(4)(B)).

### 3.8 Supplemental Consultation

The COE must reinitiate EFH consultation with NOAA Fisheries if the proposed action is substantially revised in a manner that may adversely affect EFH, or if new information becomes available that affects the basis for NOAA Fisheries' EFH conservation recommendations (50 C.F.R. 600.920(k)).

## 4.0 REFERENCES


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